



U.S. ARMY PUEBLO CHEMICAL DEPOT FACT SHEET

AIRBORNE EXPOSURE LIMITS PROTECTIVE OF PUEBLO WORK FORCE

Monitoring air within the Chemical Limited Area is a vital part of safely storing chemical agent. The safety of the workforce, the community and the environment is always top priority. Mobile laboratories known as Real Time Analytical Platforms (RTAPs) monitor the interior atmosphere of the 45 storage structures (igloos) on either a daily or weekly basis. Additionally, igloos are monitored for agent detection before the toxic chemical workers enter for routine maintenance or inspections. The U.S. Army Chemical Materials Activity Monitoring Office and the Colorado Department of Public Health and Environment conduct oversight of the monitoring data to ensure worker and community protection.



MINICAMS®

The primary monitor used is a Miniature Continuous Air Monitoring System (MINICAMS®). These near real-time monitors sample the air every five to 14 minutes and are capable of 24-hour operation when monitoring igloos. Near-real-time data collection is the ability to collect data automatically on demand and have the data delivered and analyzed quickly enough to affect monitoring and control decisions. MINICAMS® are very sensitive and can detect extremely low levels of chemical agent vapor by using a process called gas chromatography.



DAAMS

The Depot Area Air Monitoring System (DAAMS) continually samples the air for chemical agent vapor by drawing the air through glass tubes and trapping any chemical agent vapors in a special material. Sampling times vary from as few as two to 12 hours. These tubes are collected and analyzed within 72 hours.

IDLH

(Immediately dangerous to life or health)

The concentration at which an unprotected worker could escape within 30 minutes, without experiencing escape-impairing or irreversible health effects.

1 IDLH

= 0.7 milligrams per cubic meter

STEL

(Short-term exposure limit)

Represents the maximum concentration to which workers can be exposed for a short period of time (15 minutes total) during a workday. Workers take usual protective action when .25 STEL concentration level is reached.

1 STEL

= 0.003 milligrams per cubic meter



.25 STEL
Precautionary alarm level

WPL

(Worker population limit)

A time-weighted average concentration in which an unprotected worker can safely operate in for an 8-hour workday over a working lifetime without experiencing adverse effects.

1 WPL

= 0.0004 milligrams per cubic meter

GPL

(General population limit)

Concentration to which members of the general population can be exposed continuously without adverse health effects.

GPL

= 0.00002 milligrams per cubic meter

Putting it in Perspective

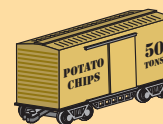
1 grain of salt in 51.42 lbs of potato chips



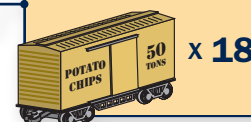
1 grain of salt in 6 tons (12,000 lbs) of chips



1 grain of salt in 45 tons (90,000 lbs) of potato chips (approximately one 50 ton freight car)



1 grain of salt in 900 tons (1,800,000 lbs) of potato chips (18 freight cars of 50 tons)



*The AELs on this fact sheet are for Mustard.

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